CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.04/TK/CSR-04/013c/CEMENT/2016-17 Date: 16.04.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.
*NAME OF THE WORK	:	Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.
*REFERENCE	:	BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	15.04.2016
PERIOD OF TESTING	:	15.04.2016 to 16.04.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	165Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Ramsanjeev AE 16/4

VISHWANATH .C
Quality Manager

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ ಕಛೇರಿ
ಯಲಹಂಕ ನ್ಯೂಟೌನ್ ಉಪವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

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Job No.: CTCE/BBMP/W.No.04/TK/CSR-04/013c/SAND-Gradation/2016-17 : 16.04.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

* Agency : **Mr. Thirumalaiswamy.K,**
No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.

* Name of Work : Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.

* Reference : BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 15.04.2016

Date of Testing : 16.04.2016

Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.20	90-100	90-100	90-100	95-100
2.36	74.70	60-95	75-100	85-100	95-100
1.18	52.50	30-70	55-90	75-100	90-100
600 Micron	28.40	15-34	35-59	60-79	80-100
300 Micron	16.50	5-20	8-30	12-40	15-50
150 Micron	7.30	0-10	0-10	0-10	0-15

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.04/TK /STEEL/2016-17 18.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.
Name of the Work	:	Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016
Date of Test	:	18.04.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

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Job No.: CTCE/BBMP/W.No.04/TK /STEEL/2016-17 18.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : **Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.

Name of the Work : Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016

Date of Test : 18.04.2016

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.45	O.K	O.K

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Job No.: CTCE/BBMP/W.No.04/TK /STEEL/2016-17 18.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.
Name of the Work	:	Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016
Date of Test	:	18.04.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	16	1.58	520	562	13.60	O.K	O.K

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Job No.: CTCE/BBMP/W.No.04/TK/CSR-04/013c/CUBE/2016-17 19.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
* Agency	: **Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.
* Name of the work	: Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.
* Reference	: BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016
* Sample ID	: Culverts Bottom Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 19.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.04.2016	19.05.2016	8.182	500.3	22.23
2	21.04.2016	19.05.2016	8.263	476.6	21.18
3	21.04.2016	19.05.2016	8.349	495.2	22.01

* Information is furnished by the Customer/Representative

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Ram Sanjeev AE 19/5

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Job No.: CTCE/BBMP/W.No.04/TK/CSR-04/013c/CUBE/2016-17 23.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* **Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

* **Agency** : **Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.

* **Name of the work** : Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.

* **Reference** : BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016

* **Sample ID** : Culverts Side Wall Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* **Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 23.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.04.2016	23.05.2016	8.147	505.5	22.46
2	25.04.2016	23.05.2016	8.283	507.0	22.53
3	25.04.2016	23.05.2016	8.740	477.2	21.21

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Job No.: CTCE/BBMP/W.No.04/TK/CSR-04/013c/CUBE/2016-17 28.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
* Agency	: **Mr. Thirumalaiswamy.K,** No. 34, Dinnuru Darmanna Garden, R.T.Nagara, Bangalore.
* Name of the work	: Construction of culverts in Ward No. 04 Yelahanka New Town Sub Division, BBMP, Bangalore.
* Reference	: BBMP/AEE/YNTSD/ /2015-16 Dated: 15.04.2016
* Sample ID	: Culverts Deck Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 28.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.04.2016	28.05.2016	8.263	498.6	22.16
2	30.04.2016	28.05.2016	8.381	513.5	22.82
3	30.04.2016	28.05.2016	8.456	488.6	21.71

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